

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A process for preparing a molecular sieve adsorbent for selective adsorption of oxygen from air, the process comprising
 - (i) exchanging zeolite X with water-soluble salt of a rare earth metal selected from the group consisting essentially of cerium, europium, gadolinium and any mixture thereof;
 - (ii) filtering the mixture, washing the powder or pellet with hot distilled water ~~and~~ until it is free from anions to obtain an exchanged zeolite;
 - (iii) drying the exchanged zeolite;
 - (iv) and activating the exchanged zeolite,

wherein the process does not involve the use of calcination,
~~and~~ wherein the process does not involve the use of clays and organic binders, and
wherein the adsorbent has adsorbence up to 850mm HG.
2. (Original) A process as claimed in claim 1 wherein the zeolite X is used in powder form has 100% crystallinity or pellet form.
3. (Currently Amended) A process as claimed in claim 1 wherein the Na cations of zeolite are exchanged with salts of the rare earth metals selected from chloride, nitrate and acetate.
4. (Original) A process as claimed in claim 1 wherein the cation exchange is carried at a temperature in the range of 30°C to 90°C for a period in the range of 4 to 8 hours.

5. (Original) A process as claimed in claim 1 wherein the cation exchange is carried out at a cation concentration in the range of 0.01 to 0.1 M solution.

6. (Original) A process as claimed in claim 1 wherein the exchanged zeolite is dried in a temperature range of 20°C to 80°C in air or under vacuum.

7. (Original) A process as claimed in claim 1 wherein the exchanged zeolite is activated at the temperature range of 350 to 450°C for a period in the range of 3-6 hours followed by cooling under inert or vacuum.

8. (Previously Presented) A process as claimed in claim 1 wherein the adsorbent does not contain any lithium, potassium or calcium ions.

9. (New) A process for preparing a molecular sieve adsorbent for selective adsorption of oxygen from air, the process consisting essentially of:

- (i) exchanging zeolite X with water-soluble salt of a rare earth metal selected from the group consisting essentially of cerium, europium, gadolinium and any mixture thereof;
- (ii) filtering the mixture, washing the powder or pellet with hot distilled water ~~and~~ until it is free from anions to obtain an exchanged zeolite;
- (iii) drying the exchanged zeolite;
- (iv) and activating the exchanged zeolite.

10. (New) A process as claimed in claim 9 wherein the zeolite X is used in powder form has 100% crystallinity or pellet form.

11. (New) A process as claimed in claim 9 wherein the Na cations of zeolite are exchanged with salts of the rare earth metals selected from chloride, nitrate and acetate.

12. (New) A process as claimed in claim 9 wherein the cation exchange is carried at a temperature in the range of 30°C to 90°C for a period in the range of 4 to 8 hours.

13. (New) A process as claimed in claim 9 wherein the cation exchange is carried out at a cation concentration in the range of 0.01 to 0.1 M solution.

14. (New) A process as claimed in claim 9 wherein the exchanged zeolite is dried in a temperature range of 20°C to 80°C in air or under vacuum.

15. (New) A process as claimed in claim 9 wherein the exchanged zeolite is activated at the temperature range of 350 to 450°C for a period in the range of 3-6 hours followed by cooling under inert or vacuum.

16. (New) A process as claimed in claim 9 wherein the adsorbent does not contain any lithium, potassium or calcium ions.